

CERTIFICATION UNDER 37 C.F.R. § 1.10

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Christine Kierzek

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Continuation Application of:

Inventor: Klaus A. Wieder

Title: Mold Insert

Parent Application Data:

Serial No.: 09/177,267

Filed: October 22, 1998

Examiner: E. Luk

Group Art Unit: 1722

Title: Mold Insert

PRELIMINARY AMENDMENT

Director of the U.S. Patent and Trademark Office
Box Patent Application – Continuation Application - Fee
Washington, DC 20231

Dear Sir:

This Preliminary Amendment is directed to a new U.S. application as identified above.
Please enter this preliminary amendment prior to calculating the fees.

In advance of examination, Applicants respectfully request that the following amendment be entered.

In The Specification

Please replace the title on page 1, line 1, with the following title:

-- Ejector Pin and Method --

Please insert after the title:

---Cross Reference to Related Application

This application is a continuation application of presently copending U.S. Application Serial No. 09/177,267, filed October 22, 1998 and entitled "Mold Insert," the entirety of which is incorporated herein by reference. ---

Please replace the Field of the Invention on page 1, starting at line 2, with the following Field of the Invention:

--- Field of the Invention

The present invention relates to an ejector pin and method for a mold and more particularly to an ejector pin blank, ejector pin, and method for making an ejector pin. ---

Please replace the paragraph on page 15, starting at line 3, with the following replacement paragraph:

---As is shown in FIG. 2, each pin 102 of this invention has a head 110 at one end that is mounted to an elongate barrel 112. The head 110 is preferably mounted to the barrel 112 by a fastener 114, such as a screw or a bolt, that extends through a bore 126 (Fig. 9A) in the head and which is threadably received in a threaded bore 128 in the end 120 of the barrel 112. ---

In The Claims

Please cancel claims 1-50.

Please add new claims 51-73, as follows:

51. An ejector pin for a mold comprising:

(a) a head; and

(b) a barrel including an end at which the head is disposed, the barrel having a length that is capable of being cut and thereby decreased in length so as to accommodate a mold into which the ejector pin is to be assembled.

52. An ejector pin of claim 51, wherein the barrel has a hardened portion and a softer portion that is softer than the hardened portion which has an end that is cut to decrease the length of the barrel so as to accommodate the mold in which the ejector pin is to be assembled and wherein, after the barrel has been cut to decrease the length of the barrel, the head is integrally formed in the softer portion.

53. An ejector pin of claim 51, wherein the barrel has an end that is cut to decrease the length of the barrel so as to accommodate the mold in which the ejector pin is to be assembled and the head comprises a separate component that is mounted the end of the barrel that has been cut.

54. An ejector pin of claim 53, further comprising an insert received in a pocket in the barrel of the pin that is disposed at an end that is opposite the end at which the head is mounted.

55. An ejector pin of claim 54, wherein the insert comprises an indicia-imprinting insert, and further comprising a cup mounted to the end of the barrel that is opposite the end at

which the head is mounted and wherein the indicia-imprinting insert is removably received in the cup.

56. An ejector pin of claim 51, wherein the head comprises a separate component that is threadably received by the barrel to mount the head to the barrel.

57. An ejector pin of claim 56, wherein the head is comprised of a pair of spaced apart arms and further comprising a fastener that extends from one arm to the other arm to clamp the head to the barrel.

58. An ejector pin of claim 56, wherein the head includes an axially inwardly extending recess that is defined by an upraised sidewall, the recess facing the barrel when the barrel is assembled into the head, and wherein the sidewall includes a plurality of notches forming a notched inner periphery; and wherein the barrel includes a radially inwardly extending groove that extends axially at least a portion of the length of the barrel, and

further comprising a coupling ring that is received in the recess in the head and that prevents rotation of the ring relative to the head.

59. An ejector pin of claim 58, wherein the coupling ring includes (i) a pair of radially outwardly extending, circumferentially spaced apart projections that are received in a pair of the notches of the sidewall, and (ii) a locator projection that extends radially inwardly from the ring and that is received in the groove of the barrel.

60. An ejector pin of claim 59, wherein the notches of the sidewall and locator projection are generally arcuate.

61. An ejector pin of claim 59, wherein the groove extends axially from the threaded end of the barrel toward the opposite end.

62. An ejector pin of claim 61, wherein the groove is an elongate groove that terminates axially beyond the threaded portion at an unthreaded portion of the barrel.

63. An ejector pin of claim 61, wherein the coupling ring comprises a washer.

64. An ejector pin of claim 51, wherein the head comprises a separate component that engages the end of the barrel to which the head is mounted to prevent relative rotation between the head and the barrel.

65. An ejector pin of claim 64, wherein the head includes a pocket and the end of the barrel to which the head is mounted is received in the pocket and the pocket is configured so as to prevent relative rotation between the head and the barrel when the head is mounted to the barrel.

66. An ejector pin of claim 65 further comprising a fastener that mounts the head to the barrel.

67. An ejector pin of claim 64, wherein one of the barrel and the head has a first locator flat and the other one of the barrel and the head has a second complementary locator flat that contacts the first locator flat when the barrel is received in the pocket to prevent relative rotation between the barrel and the head.

68. An ejector pin of claim 51 wherein the barrel has a cut end where it is cut to length, and the head comprises a separate component that is friction welded or inertia welded to the cut end of the barrel.

69. An ejector pin for a mold comprising:

(a) a head;

(b) a barrel having a hardened portion at one end that contacts a part being molded to eject that part and a portion that is softer than the hardened portion at an end at which the head is disposed, the barrel having a length that is capable of being cut to form the end at which the head is disposed and thereby decreased in length so as to accommodate a mold into which the ejector pin is to be assembled;

(c) a fastener that mounts the head to the barrel; and

(d) wherein one of the head and the barrel adjacent the end that is capable of being cut has a locator flat and the other one of the head and the barrel adjacent the end that is capable of being cut has a complementary locator wall that mate to oppose relative rotation between the head and the barrel when the head is mounted to the barrel.

70. An ejector pin for a mold comprising:

(a) a head;

(b) a barrel having a hardened portion at one end that contacts a part being molded to eject that part and a portion that is softer than the hardened portion at an end at which the head is disposed, the barrel having a length that is capable of being cut to form the end at which the head is disposed and thereby decreased in length so as to accommodate a mold into which the ejector pin is to be assembled;

(c) wherein the head is friction welded or inertia welded to the cut end of the barrel.

71. A method of making an ejector pin for a mold comprising:

- (a) providing a head and a blank that has a pair of ends;
- (b) hardening the blank adjacent one end;
- (c) cutting the blank adjacent the other end to form a cut end to reduce its length so as to fit into the mold; and
- (d) attaching the head to the cut end by friction welding or spin welding.

72. A method of making an ejector pin for a mold comprising:

- (a) providing a blank that has a pair of ends;
- (b) hardening a portion of the blank adjacent one end while leaving a portion of the blank adjacent the other end softer than that portion of the surface of the blank that is hardened; and
- (c) forming a head in the softer portion of the blank using a material removal process that also cuts the blank so as to reduce its length so as to fit into the mold.

73. A method according to claim 72 wherein (1) the hardened portion of the blank is generally cylindrical to form a generally cylindrical shaft having a hardened end that contacts a part being molded in the mold to eject the part, (2) during the forming step (c) material is removed from the portion of the blank that is softer than the hardened portion of the blank to form a cylindrical shaft adjacent the head, and (3) the head that is formed has a width that is larger than the diameter of the shaft.

REMARKS

Entry of the amendments is respectfully requested. Claims 1-50 have been canceled.

New claims 51-73 have been added. Claims 51-73 are thus pending in this application.

Drawing Corrections:

Enclosed herewith are corrected drawings, which were required in the parent application 09/177,267. To expedite prosecution of the instant continuation application, the applicant submits these in advance of a request to correct the drawings.

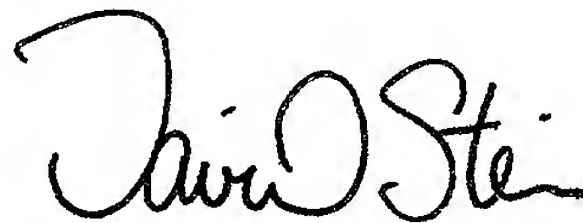
CONCLUSION

The Director is authorized to charge \$481 to Deposit Account No. 50-1170, which amount includes (1) a \$370 application filing fee for a small entity, (2) a \$27 fee associated with 3 claims in excess of 20, and (2) an \$84 fee associated with 2 independent claim in excess of 3 by a small entity. No other fees are believed to be payable with this communication.

Nevertheless, should the Examiner consider any other fees to be payable in conjunction with this or any future communication, the Director is authorized to direct payment of such fees, or credit any overpayment to Deposit Account No. 50-1170.

The application is now believed to be ready for examination on the merits. Early notification of such action is earnestly solicited. The Examiner is invited to contact the undersigned if needed.

Respectfully submitted,



David D. Stein
Reg. No. 40,828

Dated: October 30, 2001
Attorney Docket No.: 1078.007
USPTO Customer Acct. No. 23598

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Amended Specification Paragraphs

Paragraph beginning on page 15, line 3

As is shown in FIG. 2, each pin 102 of this invention has a head 110 at one end that is mounted to an elongate barrel 112. The head 110 is preferably mounted to the barrel 112 by a fastener 114, such as a screw or a bolt, that ~~is~~ extends through a bore 126 (Fig. 9A) in the head and which is threadably received in a threaded bore 128 in the end 120 of the barrel 112.

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